RETRIEVAL SOLUTION CONVERGING METHOD

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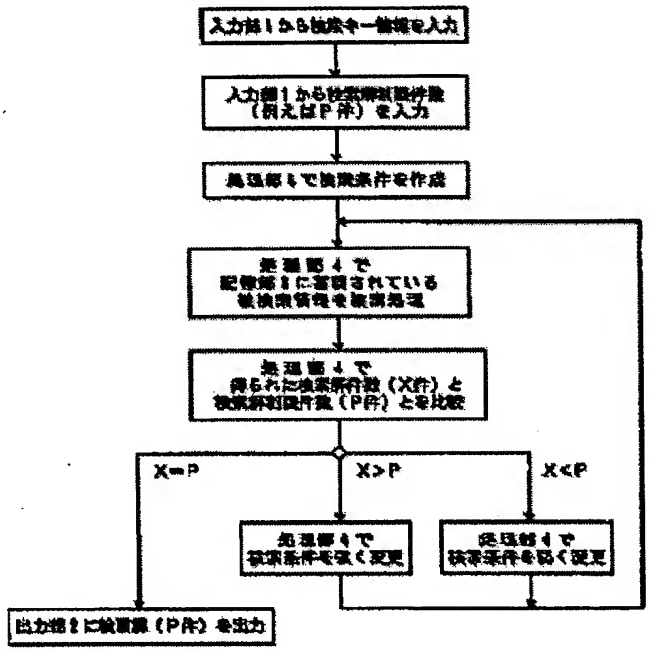
Abstract of **JP6223117**

PURPOSE:To provide the retrieval solution converging method capable of obtaining the suitable number of retrieval solutions without loading any burden to a user.
CONSTITUTION:A limited number P of retrieval solutions are inputted together with retrieval key information, retrieval conditions are prepared from the retrieval key information and the limited number P of retrieval solutions so as to retrieve information to be retrieved, a number X of provided retrieval solutions is compared with the limited number P of retrieval solutions and when the number X of retrieval solutions is more than the limited number of retrieval solutions, the retrieval is performed again while severely changing the retrieval conditions or when the number X of retrieval solutions is less than the limited number P of retrieval solutions, the retrieval is performed again while loosely changing the retrieval conditions. Thus, the limited number of retrieval solutions, namely, the fixed number of retrieval solutions are obtained.



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[Claim 4] A search solution convergence method in an information search system comprising an input unit, an output unit, a storage unit, and a process unit, the process unit using at least one piece of search key information input from the input unit to search through information to be searched which is accumulated in the storage unit, the output unit outputting an obtained search solution, the search solution convergence method comprising:

inputting an upper limit and a lower limit for the limit number of search solutions along with the search key information by using the input unit;

creating a search condition by using the process unit based on the search key information, and the upper limit and the lower limit for the limit number of search solutions, and searching through the information to be searched by using the process unit;

comparing the number of obtained search solutions with the upper limit and the lower limit for the limit number of search solutions;

modifying the search condition to narrow the search and searching again through the information to be searched if the number of obtained search solutions exceeds the upper limit, and modifying the search condition to broaden the search and searching again through the information to be searched if the number of obtained search solutions falls below the lower limit.

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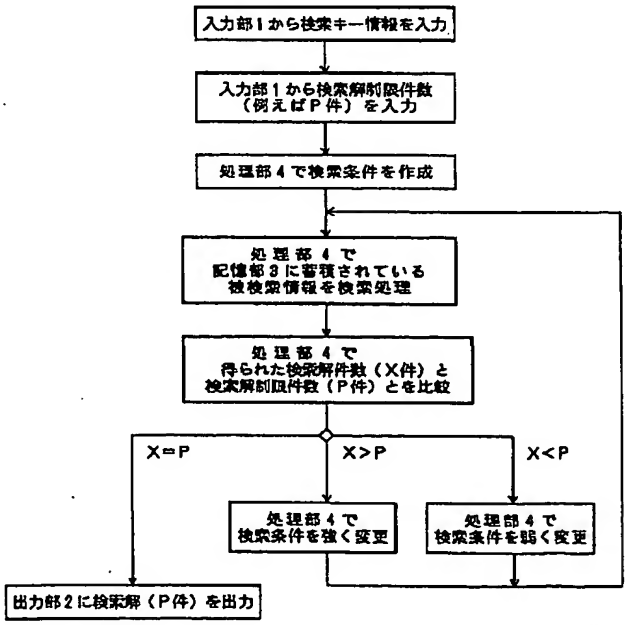
(54)【発明の名称】　検索解収束方法

(57)【要約】

【目的】　利用者に負担をかけることなく、適切な件数の検索解を得ることができる検索解収束方法を提供する。

【構成】　検索キー情報とともに検索解制限件数Ｐを入力し、該検索キー情報及び検索解制限件数Ｐから検索条件を作成して被検索情報を検索し、得られた検索解の件数Ｘと検索解制限件数Ｐとを比較し、検索解の件数Ｘが検索解制限件数Ｐより大きい時は検索条件を厳しく変更して再度検索し且つ検索解の件数Ｘが検索解制限件数Ｐより小さい時は検索条件を緩く変更して再度検索することにより、検索解制限件数Ｐ、即ち一定件数の検索解を得る。



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【特許請求の範囲】

【請求項１】　入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムにおいて、

入力部より検索キー情報とともに検索解制限件数を入力し、

処理部で前記検索キー情報及び検索解制限件数から検索条件を作成して被検索情報を検索し、

得られた検索解の件数と検索解制限件数とを比較し、

検索解の件数が検索解制限件数より大きい時は検索条件を厳しく変更して再度検索し且つ検索解の件数が検索解制限件数より小さい時は検索条件を緩く変更して再度検索するようになしたことを特徴とする検索解収束方法。

【請求項２】　入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムにおいて、

入力部より検索キー情報とともに検索解制限件数を入力し、

処理部で前記検索キー情報及び検索解制限件数から検索条件を作成して被検索情報を検索し、

得られた検索解の件数と検索解制限件数とを比較し、

検索解の件数が検索解制限件数より大きい時は検索条件を厳しく変更して再度検索するようになしたことを特徴とする検索解収束方法。

【請求項３】　入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムにおいて、

入力部より検索キー情報とともに検索解制限件数を入力し、

処理部で前記検索キー情報及び検索解制限件数から検索条件を作成して被検索情報を検索し、

得られた検索解の件数と検索解制限件数とを比較し、

検索解の件数が検索解制限件数より小さい時は検索条件を緩く変更して再度検索するようになしたことを特徴とする検索解収束方法。

【請求項４】　入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムにおいて、

入力部より検索キー情報とともに検索解制限件数の上限値及び下限値を入力し、

処理部で前記検索キー情報、検索解制限件数の上限値及び下限値から検索条件を作成して被検索情報を検索し、

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得られた検索解の件数と検索解制限件数の上限値及び下限値とを比較し、

検索解の件数が上限値より大きい時は検索条件を厳しく変更して再度検索し且つ検索解の件数が下限値より小さい時は検索条件を緩く変更して再度検索するようになしたことを特徴とする検索解収束方法。

【発明の詳細な説明】

【０００１】

【産業上の利用分野】本発明は、情報検索システムにおける検索解の収束方法に関するものである。

【０００２】

【従来の技術】従来より、入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムが知られている。

【０００３】

【発明が解決しようとする課題】しかしながら、従来のシステムでは、利用者が入力した検索キー情報をそのまま検索条件に用いて検索処理を行っていたため、検索解が得られない場合には利用者自身が検索キー情報を削除して検索条件を緩くし、再度、検索処理を行わせるという操作をしなければならず、また、検索解が多過ぎる場合には利用者自身が検索キー情報を追加して検索条件を厳しくし、再度、検索処理を行わせるという操作をするか、利用者自身が多くの検索解の中から最適な解をさらに選択しなければならないという欠点があった。

【０００４】本発明は前記従来の問題点に鑑み、利用者に負担をかけることなく、適切な件数の検索解を得ることができる検索解収束方法を提供することを目的とする。

【０００５】

【課題を解決するための手段】前記目的を達成するため、請求項１の発明として、入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムにおいて、入力部より検索キー情報とともに検索解制限件数を入力し、処理部で前記検索キー情報及び検索解制限件数から検索条件を作成して被検索情報を検索し、得られた検索解の件数と検索解制限件数とを比較し、検索解の件数が検索解制限件数より大きい時は検索条件を厳しく変更して再度検索し且つ検索解の件数が検索解制限件数より小さい時は検索条件を緩く変更して再度検索するようになした検索解収束方法を提案する。

【０００６】また、請求項２の発明として、入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解

を出力部より出力する情報検索システムにおいて、入力部より検索キー情報とともに検索解制限件数を入力し、処理部で前記検索キー情報及び検索解制限件数から検索条件を作成して被検索情報を検索し、得られた検索解の件数と検索解制限件数とを比較し、検索解の件数が検索解制限件数より大きい時は検索条件を厳しく変更して再度検索するようになした検索解収束方法を提案する。

【０００７】また、請求項３の発明として、入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムにおいて、入力部より検索キー情報とともに検索解制限件数を入力し、処理部で前記検索キー情報及び検索解制限件数から検索条件を作成して被検索情報を検索し、得られた検索解の件数と検索解制限件数とを比較し、検索解の件数が検索解制限件数より小さい時は検索条件を緩く変更して再度検索するようになした検索解収束方法を提案する。

【０００８】また、請求項４の発明として、入力部、出力部、記憶部及び処理部を有し、入力部より入力される少なくとも１つの検索キー情報を用いて処理部で記憶部に蓄積されている被検索情報を検索し、得られた検索解を出力部より出力する情報検索システムにおいて、入力部より検索キー情報とともに検索解制限件数の上限値及び下限値を入力し、処理部で前記検索キー情報、検索解制限件数の上限値及び下限値から検索条件を作成して被検索情報を検索し、得られた検索解の件数と検索解制限件数の上限値及び下限値とを比較し、検索解の件数が上限値より大きい時は検索条件を厳しく変更して再度検索し且つ検索解の件数が下限値より小さい時は検索条件を緩く変更して再度検索するようになした検索解収束方法を提案する。

【０００９】

【作用】請求項１の発明によれば、得られた検索解の件数が検索解制限件数より大きい時は検索条件を厳しく変更して再度検索し且つ得られた検索解の件数が検索解制限件数より小さい時は検索条件を緩く変更して再度検索するため、検索解制限件数、即ち一定件数の検索解が得られる。また、請求項２の発明によれば、得られた検索解の件数が検索解制限件数より大きい時は検索条件を厳しく変更して再度検索するため、検索解制限件数以下の検索解が得られる。また、請求項３の発明によれば、得られた検索解の件数が検索解制限件数より小さい時は検索条件を緩く変更して再度検索するため、検索解制限件数以上の検索解が得られる。また、請求項４の発明によれば、得られた検索解の件数が検索解制限件数の上限値より大きい時は検索条件を厳しく変更して再度検索し且つ得られた検索解の件数が下限値より小さい時は検索条件を緩く変更して再度検索するため、検索解制限件数の上限値以下で且つ下限値以上の検索解が得られる。

【００１０】

【実施例】図１は本発明方法を適用する情報検索システムの構成図であり、図中、１は入力部、２は出力部、３は記憶部、４は処理部である。

【００１１】入力部１は検索キー情報、検索解制限件数等を入力する機能を有する。出力部２は検索解等を出力する機能を有する。記憶部３は処理手順、被検索情報等を蓄積しておく機能を有する。処理部４は記憶部３に蓄積されている処理手順に従って検索処理を行う機能を有する。

【００１２】ここで、検索解制限件数とは「Ｐ件」、「Ｐ件以下」、「Ｐ件以上」、「Ｐ件以下で且つＱ件以上」等の出力すべき検索解の件数に関する条件である。

【００１３】図２は本発明方法の第１の処理手順を示すもので、ここでは検索解制限件数を一定件数、例えば「Ｐ件」とした場合の例を示す。

【００１４】まず、入力部１より検索キー情報及び検索解制限件数、即ち「Ｐ件」を入力すると、処理部４は該検索キー情報及び検索解制限件数から検索条件を作成し、これを用いて記憶部３に蓄積されている被検索情報を検索する。また、処理部４は該検索の結果、得られた検索解の件数、例えば「Ｘ件」と検索解制限件数、即ち「Ｐ件」とを比較し、「Ｘ＝Ｐ」であれば、出力部２に検索解を出力する。

【００１５】一方、この際、「Ｘ＞Ｐ」であれば、処理部４は検索条件を強く変更し、再度検索を行い、また、「Ｘ＜Ｐ」であれば、処理部４は検索条件を弱く変更し、再度検索を行う。このようにして、処理部４は検索条件の変更及び検索を繰り返し、最終的に「Ｐ件」の検索解を得る。

【００１６】なお、得られた検索解の件数Ｘと検索解制限件数Ｐとの比較の方法として、Ｐにある程度の幅Ｋを持たせて、｜Ｘ－Ｐ｜＜Ｋであれば、Ｘ＝Ｐとみなして検索解を出力するようにしても良い。

【００１７】検索に使用する検索条件を動的に変更する方法としては、入力された検索キー情報と、記憶部３に蓄積されている被検索情報に含まれるキー情報との一致文字数が多い方が検索条件が厳しい（強い）、一致文字数が少ない方が検索条件が緩い（弱い）と考えて、一致文字数を変更する（Ｘ文字の完全一致→（Ｘ－１）文字の前方一致→（Ｘ－２）文字の前方一致→……等）方法や、入力された複数の検索キー情報の中で実際に検索に使用する検索キー情報の数が多い方が検索条件が強く、検索に使用する検索キー情報の数が少ない方が検索条件が弱いと考えて、検索に使用する検索キー情報の数を変更する方法等が考えられる。

【００１８】また、検索条件の変更の手順としては、最初は入力された検索キー情報の一部を使用して検索条件を作成し、得られた検索解の件数に応じて検索条件を強く又は弱く変更していく手順、あるいは最初は入力され

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た検索キー情報を全て使用して最も強い検索条件を作成し、徐々に検索条件を弱めていく手順、もしくは最初は入力された検索キー情報のごく一部を使用して最も弱い検索条件を作成し、徐々に検索条件を強めていく手順等が考えられる。

【００１９】また、図３は検索解制限件数を一定件数以下、例えば「Ｐ件以下」とした場合の処理手順を、また、図４は検索解制限件数を一定件数以上、例えば「Ｐ件以上」とした場合の処理手順を、また、図５は検索解制限件数を一定件数以下で且つ他の一定件数以上、例えば「Ｐ件以下で且つＱ件以上」とした場合の処理手順をそれぞれ示す。

【００２０】なお、本発明は処理部４が記憶部３に蓄積されている被検索情報を検索する際に使用しても、検索解を出力部２へ出力する際に適用しても同様なことは明らかである。

【００２１】

【発明の効果】以上説明したように本発明によれば、得

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られる検索解が一定件数又は一定件数以下あるいは一定件数以上もしくは一定件数以下で且つ他の一定件数以上となるまで検索条件を変更して検索を行うので、利用者自身が検索キー情報を削除し又は追加して再度、検索処理を行わせるという操作をしたり、多くの検索解の中から最適な解をさらに選択したりする必要がなく、従って、利用者に負担をかけることなく、適切な件数の検索解を得ることができる。

【図面の簡単な説明】

【図１】本発明方法を適用する情報検索システムの構成図

【図２】本発明方法の第１の処理手順を示す流れ図

【図３】本発明方法の第２の処理手順を示す流れ図

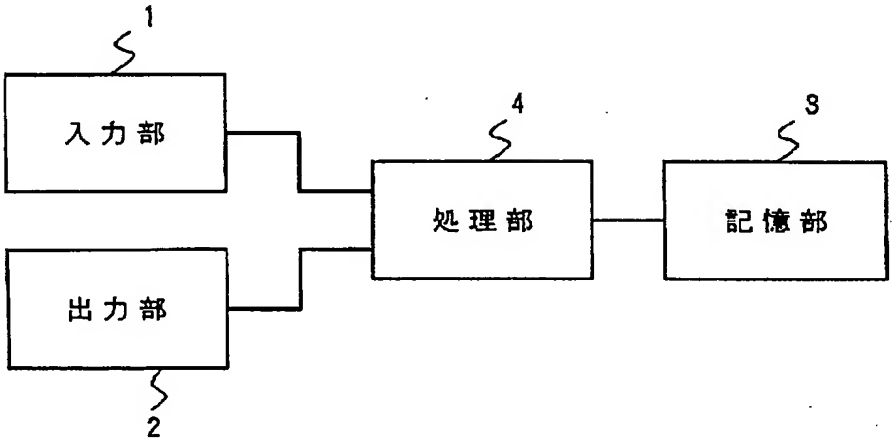
【図４】本発明方法の第３の処理手順を示す流れ図

【図５】本発明方法の第４の処理手順を示す流れ図

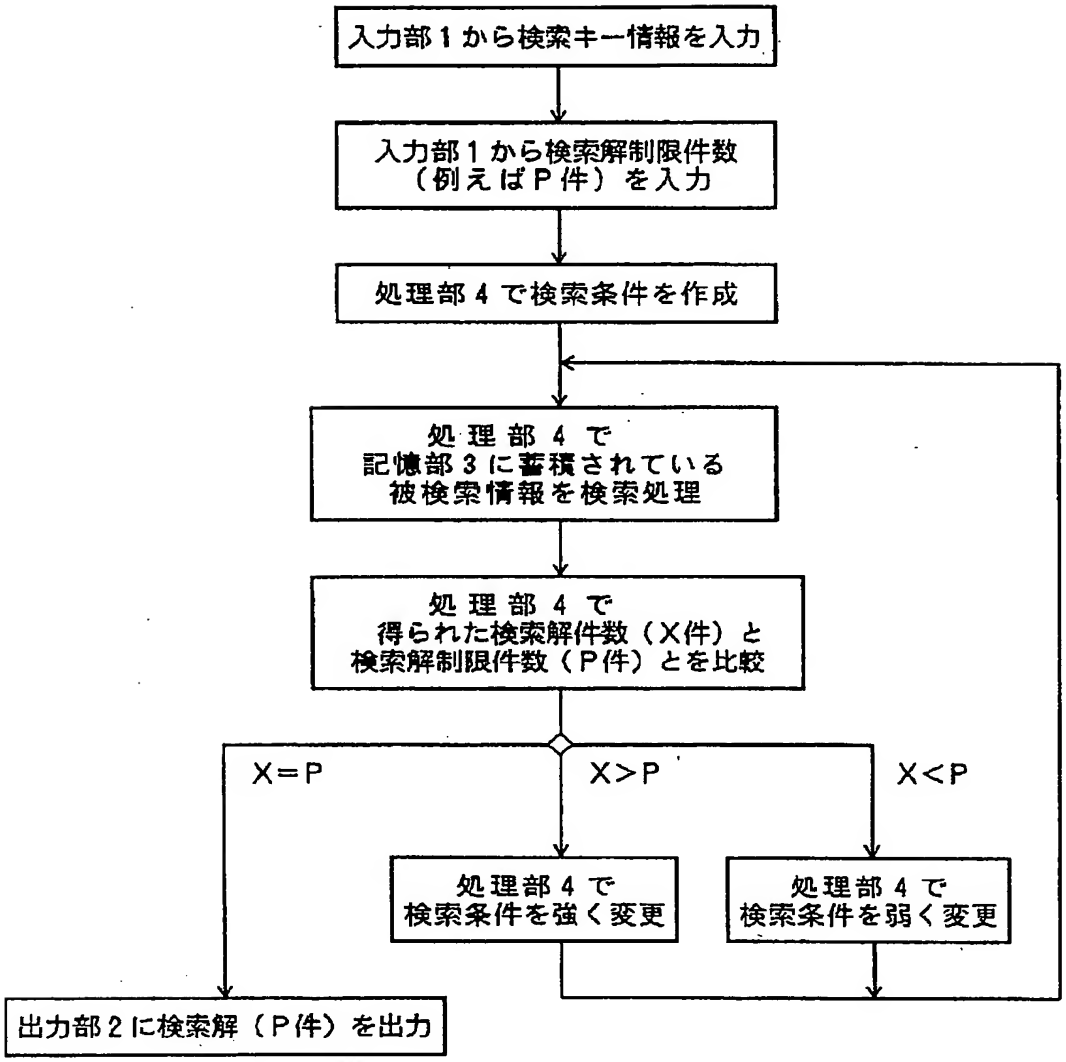
【符号の説明】

１…入力部、２…出力部、３…記憶部、４…処理部。

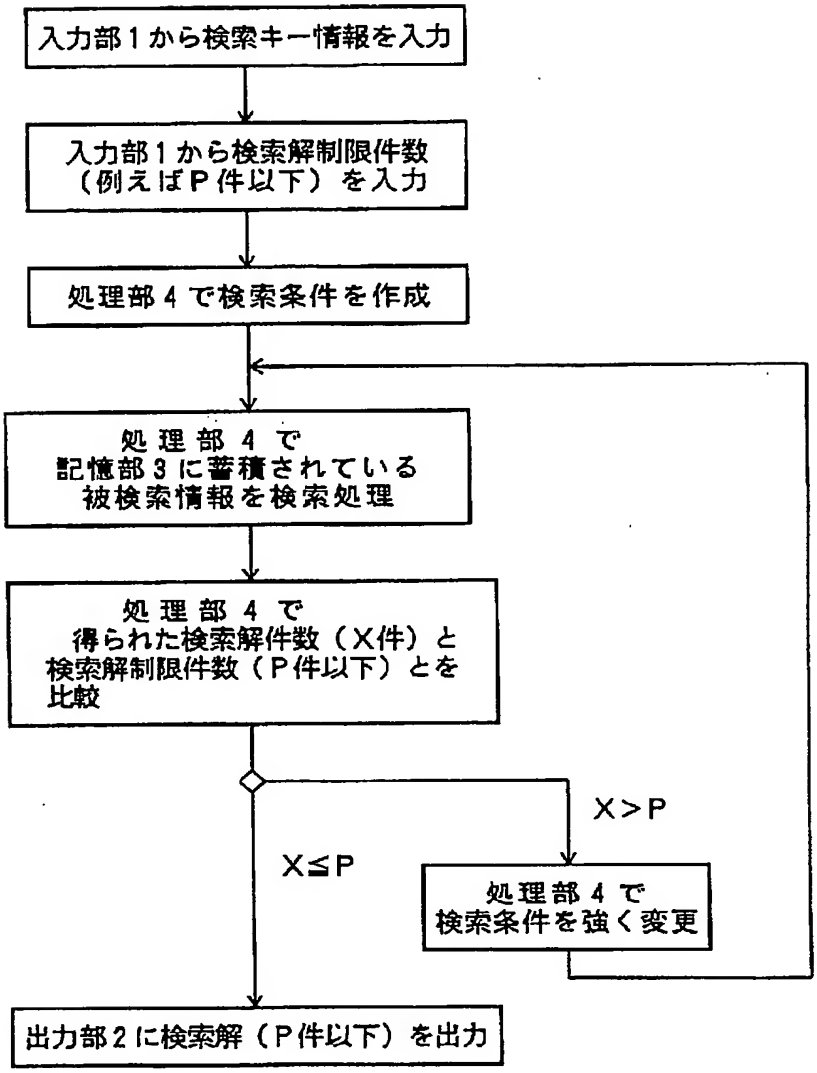
【図１】



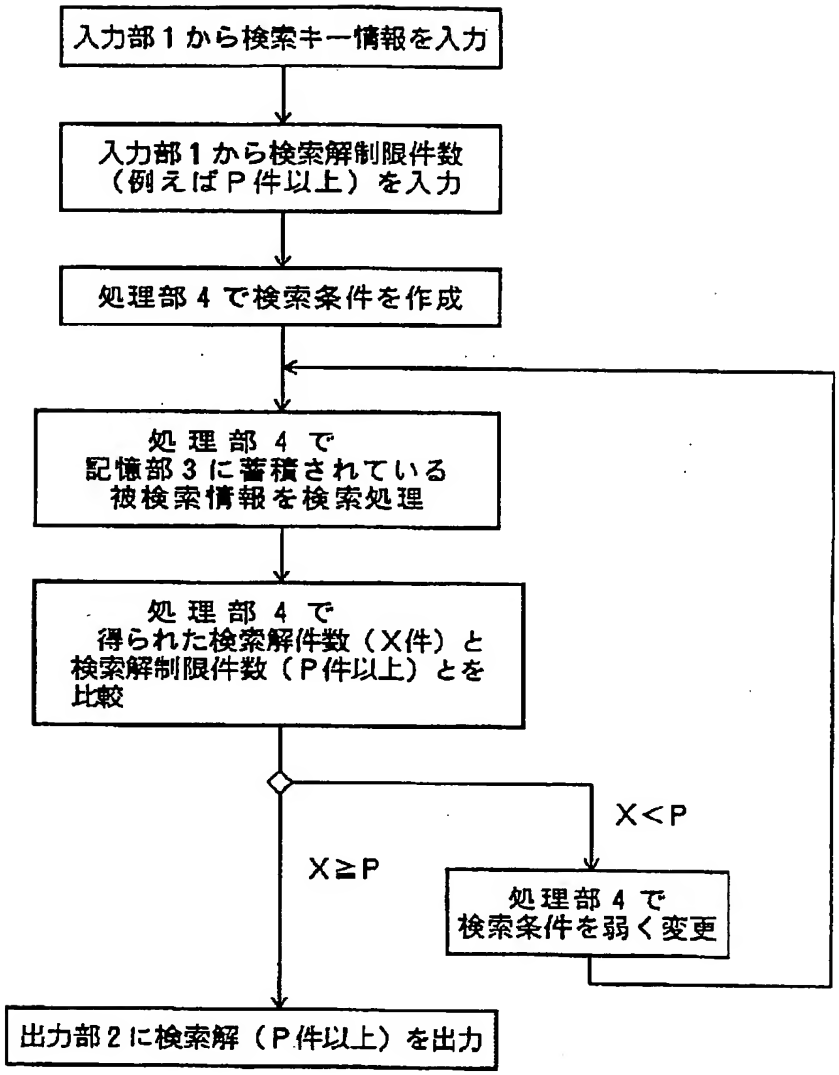
【図２】


入力部１から検索キー情報を入力
入力部１から検索解制限件数（例えばＰ件）を入力
処理部４で検索条件を作成
処理部４で記憶部３に蓄積されている被検索情報を検索処理
処理部４で得られた検索解件数（Ｘ件）と検索解制限件数（Ｐ件）とを比較
Ｘ＝Ｐ
Ｘ＞Ｐ
Ｘ＜Ｐ
処理部４で検索条件を強く変更
処理部４で検索条件を弱く変更
出力部２に検索解（Ｐ件）を出力

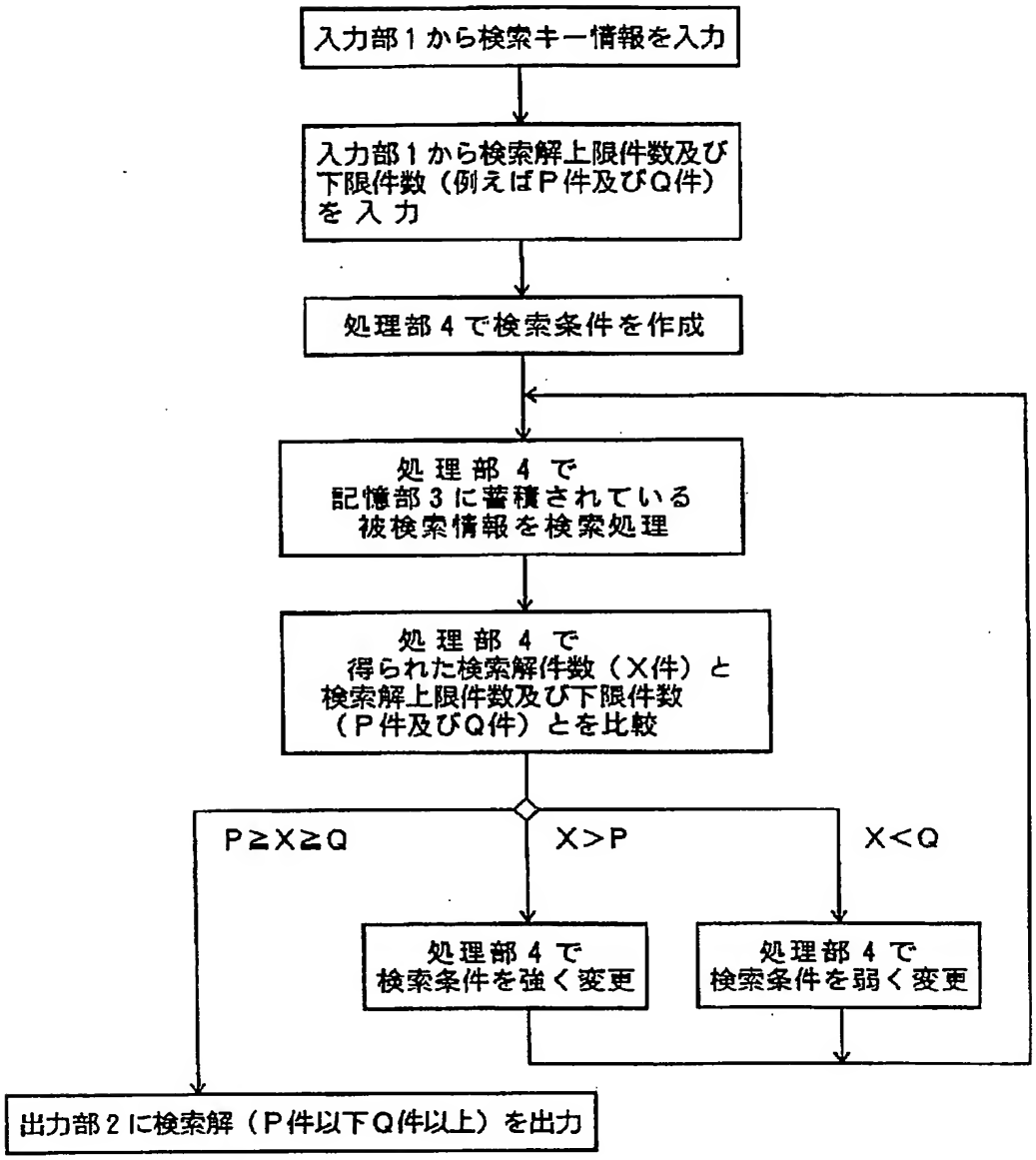
【図３】


入力部１から検索キー情報を入力
入力部１から検索解制限件数（例えばＰ件以下）を入力
処理部４で検索条件を作成
処理部４で記憶部３に蓄積されている被検索情報を検索処理
処理部４で得られた検索解件数（Ｘ件）と検索解制限件数（Ｐ件以下）とを比較
Ｘ＞Ｐ
Ｘ≦Ｐ
処理部４で検索条件を強く変更
出力部２に検索解（Ｐ件以下）を出力

【図４】


入力部１から検索キー情報を入力
入力部１から検索解制限件数（例えばＰ件以上）を入力
処理部４で検索条件を作成
処理部４で記憶部３に蓄積されている被検索情報を検索処理
処理部４で得られた検索解件数（Ｘ件）と検索解制限件数（Ｐ件以上）とを比較
Ｘ＜Ｐ
Ｘ≧Ｐ
処理部４で検索条件を弱く変更
出力部２に検索解（Ｐ件以上）を出力

【図５】


入力部１から検索キー情報を入力
入力部１から検索解上限件数及び下限件数（例えばＰ件及びＱ件）を入力
処理部４で検索条件を作成
処理部４で記憶部３に蓄積されている被検索情報を検索処理
処理部４で得られた検索解件数（Ｘ件）と検索解上限件数及び下限件数（Ｐ件及びＱ件）とを比較
Ｐ≧Ｘ≧Ｑ
Ｘ＞Ｐ
Ｘ＜Ｑ
処理部４で検索条件を強く変更
処理部４で検索条件を弱く変更
出力部２に検索解（Ｐ件以下Ｑ件以上）を出力

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CLAIMS

[Claim(s)]
[Claim 1]Have an input part, an outputting part, a storage parts store, and a treating part, and information accumulated in a storage parts store by a treating part using at least one search key information that it is inputted from an input part to be searched is retrieved, In an information retrieval system which outputs an obtained retrieved solution from an outputting part, the retrieved solution restriction number is inputted with search key information from an input part, Create a search condition from said search key information and the retrieved solution restriction number by a treating part, and information to be searched is retrieved, A retrieved solution convergence method having compared the number of cases and the retrieved solution restriction number of a retrieved solution which were obtained, having changed a search condition severely when the number of a retrieved solution was larger than the retrieved solution restriction number, and making as [search / change a search condition loosely and / when the number of a retrieved solution is smaller than the retrieved solution restriction number / search again, and / it / again].
[Claim 2]Have an input part, an outputting part, a storage parts store, and a treating part, and information accumulated in a storage parts store by a treating part using at least one search key information that it is inputted from an input part to be searched is retrieved, In an information retrieval system which outputs an obtained retrieved solution from an outputting part, the retrieved solution restriction number is inputted with search key information from an input part, Create a search condition from said search key information and the retrieved solution restriction number by a treating part, and information to be searched is retrieved, A retrieved solution convergence method making as [search / change a search condition severely and / compare the number of cases and the retrieved solution restriction number of a retrieved solution which were obtained, / when the number of a retrieved solution is larger than the retrieved solution restriction number / it / again].

[Claim 3]Have an input part, an outputting part, a storage parts store, and a treating part, and information accumulated in a storage parts store by a treating part using at least one search key information that it is inputted from an input part to be searched is retrieved, In an information retrieval system which outputs an obtained retrieved solution from an outputting part, the retrieved solution restriction number is inputted with search key information from an input part, Create a search condition from said search key information and the retrieved solution restriction number by a treating part, and information to be searched is retrieved, A retrieved solution convergence method making as [search / change a search condition loosely and / compare the number of cases and the retrieved solution restriction number of a retrieved solution which were obtained, / when the number of a retrieved solution is smaller than the retrieved solution restriction number / it / again].

[Claim 4]Have an input part, an outputting part, a storage parts store, and a treating part, and information accumulated in a storage parts store by a treating part using at least one search key information that it is inputted from an input part to be searched is retrieved, In an information retrieval system which outputs an obtained retrieved solution from an outputting part, upper limit and a lower limit of the retrieved solution restriction number are inputted with search key information from an input part, Create a search condition by a treating part from upper limit and a lower limit of said search key information and the retrieved solution restriction number, and information to be searched is retrieved, Upper limit and a lower limit of the number of a retrieved solution and the retrieved solution restriction number which were obtained are compared, A retrieved solution convergence method making as [search / change a search condition loosely and / change a search condition severely, / when the number of a retrieved solution is larger than upper limit / when the number of a retrieved solution is smaller than a lower limit / search again, and / it / again].

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application]This invention relates to the convergence method of the retrieved solution in an information retrieval system.
[0002]
[Description of the Prior Art]Conventionally, it has an input part, an outputting part, a storage parts store, and a treating part, and the information retrieval system which outputs the retrieved solution obtained by retrieving the information accumulated in the storage parts store by the treating part using at least one search key information that it is inputted from an input part to be searched from an outputting part is known.
[0003]
[Problem(s) to be Solved by the Invention]However, since the search key information which the user inputted was used for the search condition as it was in the conventional system and retrieval processing was performed, When a retrieved solution is not obtained, the user itself deletes search key information and a search condition is made loose, Must carry out operation of making retrieval processing perform again, and when there are too many retrieved solutions, the user itself adds search key information and a search condition is made severe, Operation of making retrieval processing perform was carried out again, or there was a fault that the user itself had to choose the optimal solution further out of many retrieved solutions.
[0004]An object of this invention is to provide the retrieved solution convergence method that the retrieved solution of the suitable number of cases can be obtained, without applying a burden to a user in view of said conventional problem.
[0005]
[Means for Solving the Problem]In order to attain said purpose, as an invention of claim 1 An input part, an outputting part, In an information retrieval system which outputs a retrieved

solution obtained by having a storage parts store and a treating part, and retrieving information accumulated in a storage parts store by a treating part using at least one search key information that it is inputted from an input part to be searched from an outputting part, From an input part, input the retrieved solution restriction number with search key information, create a search condition from said search key information and the retrieved solution restriction number by a treating part, and information to be searched is retrieved, The number of cases and the retrieved solution restriction number of a retrieved solution which were obtained are compared, when the number of a retrieved solution is larger than the retrieved solution restriction number, a search condition is changed severely and a retrieved solution convergence method made as [search / change a search condition loosely and / when the number of a retrieved solution is smaller than the retrieved solution restriction number / search again, and / it / again] is proposed.

[0006]It has an input part, an outputting part, a storage parts store, and a treating part as an invention of claim 2, In an information retrieval system which outputs a retrieved solution obtained by retrieving information accumulated in a storage parts store by a treating part using at least one search key information that it is inputted from an input part to be searched from an outputting part, From an input part, input the retrieved solution restriction number with search key information, create a search condition from said search key information and the retrieved solution restriction number by a treating part, and information to be searched is retrieved, The number of cases and the retrieved solution restriction number of a retrieved solution which were obtained are compared, and a retrieved solution convergence method made as [search / change a search condition severely and / when the number of a retrieved solution is larger than the retrieved solution restriction number / it / again] is proposed.

[0007]It has an input part, an outputting part, a storage parts store, and a treating part as an invention of claim 3, In an information retrieval system which outputs a retrieved solution obtained by retrieving information accumulated in a storage parts store by a treating part using at least one search key information that it is inputted from an input part to be searched from an outputting part, From an input part, input the retrieved solution restriction number with search key information, create a search condition from said search key information and the retrieved solution restriction number by a treating part, and information to be searched is retrieved, The number of cases and the retrieved solution restriction number of a retrieved solution which were obtained are compared, and a retrieved solution convergence method made as [search / change a search condition loosely and / when the number of a retrieved solution is smaller than the retrieved solution restriction number / it / again] is proposed.

[0008]It has an input part, an outputting part, a storage parts store, and a treating part as an invention of claim 4, In an information retrieval system which outputs a retrieved solution obtained by retrieving information accumulated in a storage parts store by a treating part using

at least one search key information that it is inputted from an input part to be searched from an outputting part, Upper limit and a lower limit of the retrieved solution restriction number are inputted with search key information from an input part, Create a search condition by a treating part from upper limit and a lower limit of said search key information and the retrieved solution restriction number, and information to be searched is retrieved, Upper limit and a lower limit of the number of a retrieved solution and the retrieved solution restriction number which were obtained are compared, when the number of a retrieved solution is larger than upper limit, a search condition is changed severely and a retrieved solution convergence method made as [search / change a search condition loosely and / when the number of a retrieved solution is smaller than a lower limit / search again, and / it / again] is proposed.

[0009]

[Function]When the number of the retrieved solution obtained by changing a search condition severely and searching again when the number of the obtained retrieved solution is larger than the retrieved solution restriction number is smaller than the retrieved solution restriction number according to the invention of claim 1, in order to change a search condition loosely and to search it again, The retrieved solution of the retrieved solution restriction number, i.e., the fixed number, is obtained. According to the invention of claim 2, when the number of the obtained retrieved solution is larger than the retrieved solution restriction number, in order to change a search condition severely and to search it again, the retrieved solution below the retrieved solution restriction number is obtained. According to the invention of claim 3, when the number of the obtained retrieved solution is smaller than the retrieved solution restriction number, in order to change a search condition loosely and to search it again, the retrieved solution more than the retrieved solution restriction number is obtained. When the number of the retrieved solution obtained by changing a search condition severely and searching again when the number of the obtained retrieved solution is larger than the upper limit of the retrieved solution restriction number is smaller than a lower limit according to the invention of claim 4, in order to change a search condition loosely and to search it again, It is below the upper limit of the retrieved solution restriction number, and the retrieved solution more than a lower limit is obtained.

[0010]

[Example]Drawing 1 is a lineblock diagram of the information retrieval system for which this invention method is applied, and, as for an input part and 2, a storage parts store and 4 are treating parts an outputting part and 3 one among a figure.

[0011]The input part 1 has the function to input search key information, the retrieved solution restriction number, etc. The outputting part 2 has a function which outputs a retrieved solution etc. The storage parts store 3 has a function which accumulates procedure, information to be searched, etc. The treating part 4 has the function to perform retrieval processing according to

the procedure accumulated in the storage parts store 3.

[0012]Here, the retrieved solution restriction numbers are the conditions about the number of the retrieved solution which is less than "P affair" "below P affair" "beyond P affair" "P affair, and Q or more affair" etc. should output.

[0013]Drawing 2 shows the 1st procedure of this invention method, and shows the example at the time of making the retrieved solution restriction number into the fixed number, for example, "P affair", here.

[0014]First, if search key information and the retrieved solution restriction number, i.e., "P affair", are inputted from the input part 1, the treating part 4 will create a search condition from this search key information and the retrieved solution restriction number, and will retrieve the information accumulated in the storage parts store 3 using this to be searched. The treating part 4 compares the number of the obtained retrieved solution, for example, "X affair" and the retrieved solution restriction number, i.e., "P affair", as a result of this search, and if it is "X=P", it will output a retrieved solution to the outputting part 2.

[0015]On the other hand, if it is "X>P" in this case, the treating part 4 will change a search condition strongly, and it will search again, and if it is "X<P", the treating part 4 will change a search condition weakly, and will search again. Thus, the treating part 4 repeats change and search of a search condition, and obtains the retrieved solution of "P affair" eventually.

[0016]A certain amount of width K is given to P as the method of comparison with the number X of a retrieved solution and the retrieved solution restriction number P which were obtained, and as long as it is $|X-P|<K$, it is regarded as X=P and may be made to output a retrieved solution.

[0017]As a method of changing dynamically the search condition used for search, A direction with many coincidence characters of the inputted search key information and the key information included in the information accumulated in the storage parts store 3 to be searched with a severe (strong) search condition. The method (prefix search of the prefix search -> (X-2) character of the full match -> (X-1) character of the X character -> .... etc.) of a direction with few coincidence characters thinking that a search condition is loose (weak), and changing the number of coincidence characters, The direction of a search condition with many search key information actually used for search in two or more search key information that it was inputted is strong, a direction with few search key information used for search thinks that a search condition is weak, and how to change the number of the search key information used for search etc. can be considered.

[0018]As a procedure of change of a search condition, a search condition is created using a part of search key information inputted at first, The procedure of changing the search condition strongly or weakly according to the number of the obtained retrieved solution, Or the strongest search condition is created using all the search key information inputted at first, and the

procedure which weakens the search condition gradually, or the procedure of the search key information inputted at first which creates the weakest search condition very much using a part, and strengthens the search condition gradually can be considered.

[0019]Procedure when, as for drawing 3, below the fixed number (for example, "below P affair") carries out the retrieved solution restriction number, procedure when, as for drawing 4, more than the fixed number makes the retrieved solution restriction number "beyond P affair", for example -- drawing 5 -- the retrieved solution restriction number -- below the fixed number -- and more than other fixed numbers -- for example -- "-- below P affair -- and beyond Q affair -- " -- the procedure at the time of carrying out is shown, respectively.

[0020]When the treating part 4 retrieves this invention the information accumulated in the storage parts store 3 to be searched, even if it uses it, when it outputs a retrieved solution to the outputting part 2, even if it applies it, its same thing is clear.

[0021]

[Effect of the Invention]As explained above, the retrieved solution obtained is below the fixed number, below the fixed number, more than the fixed number, or the fixed number, and it refers to this invention by changing a search condition until it becomes more than other fixed numbers.

Therefore, the retrieved solution of the suitable number of cases can be obtained, without the user's itself deleting or adding search key information, and not carrying out operation of making retrieval processing perform again, not choosing the optimal solution further out of many retrieved solutions, therefore applying a burden to a user.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]The lineblock diagram of the information retrieval system which applies this invention method
[Drawing 2]The flow chart showing the 1st procedure of this invention method
[Drawing 3]The flow chart showing the 2nd procedure of this invention method
[Drawing 4]The flow chart showing the 3rd procedure of this invention method
[Drawing 5]The flow chart showing the 4th procedure of this invention method
[Description of Notations]
1 [-- Treating part.] -- An input part, 2 -- An outputting part, 3 -- A storage parts store, 4

[Translation done.]

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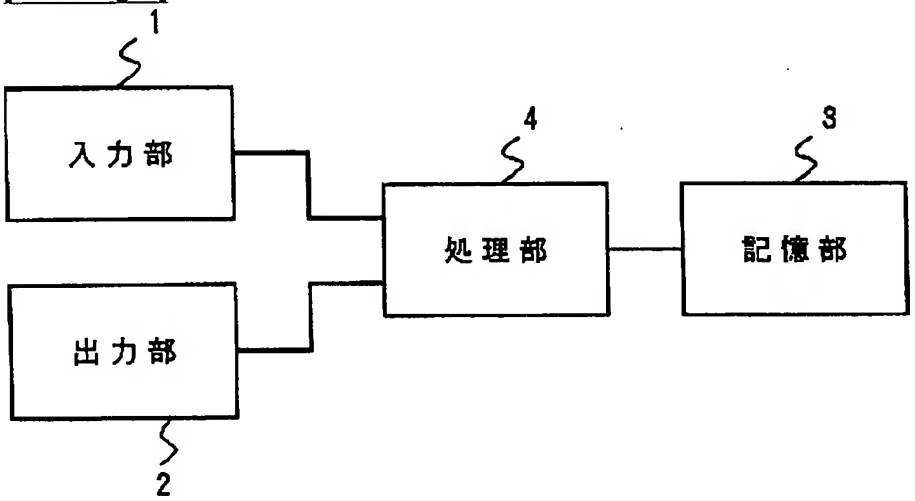
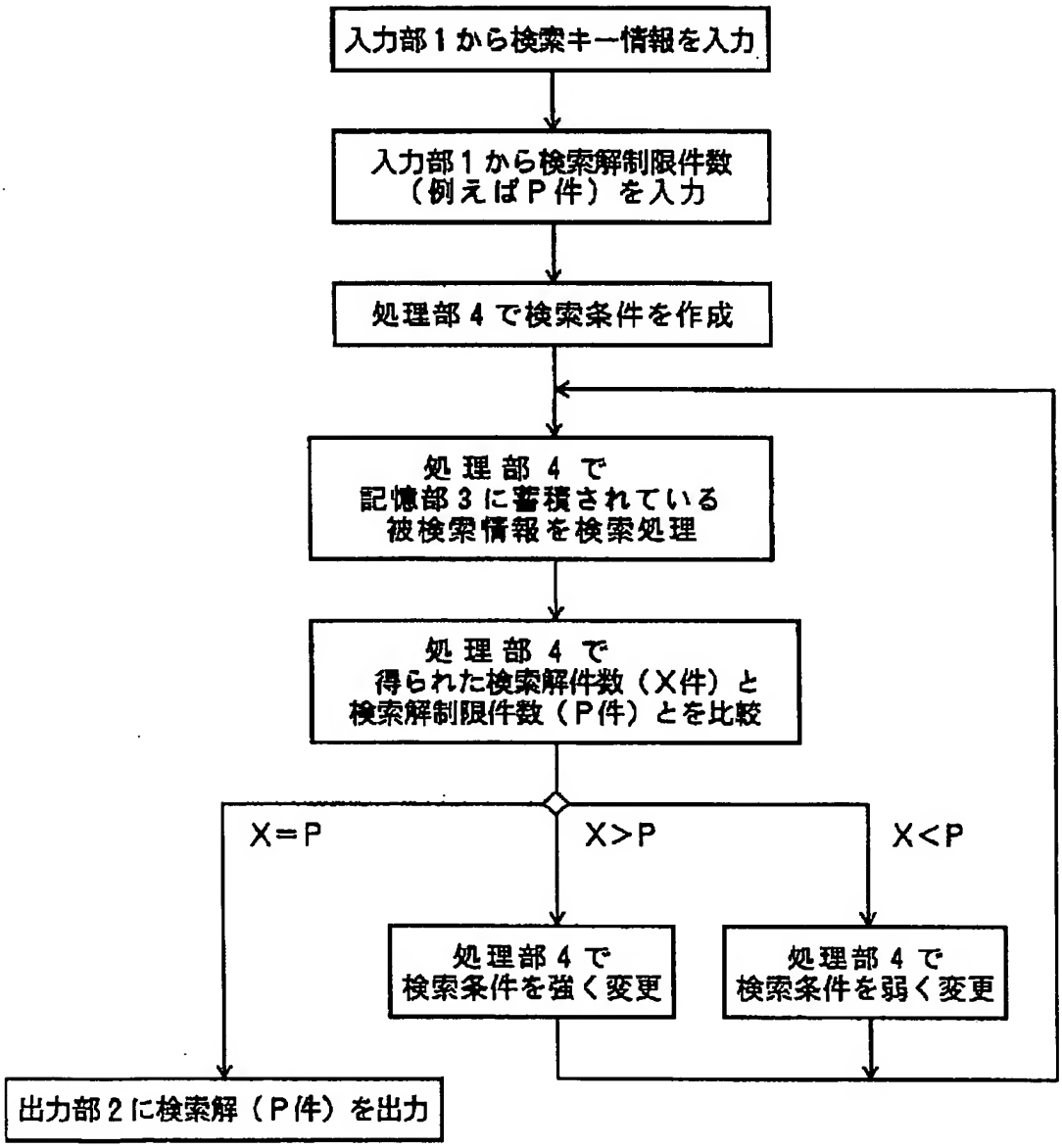
DRAWINGS

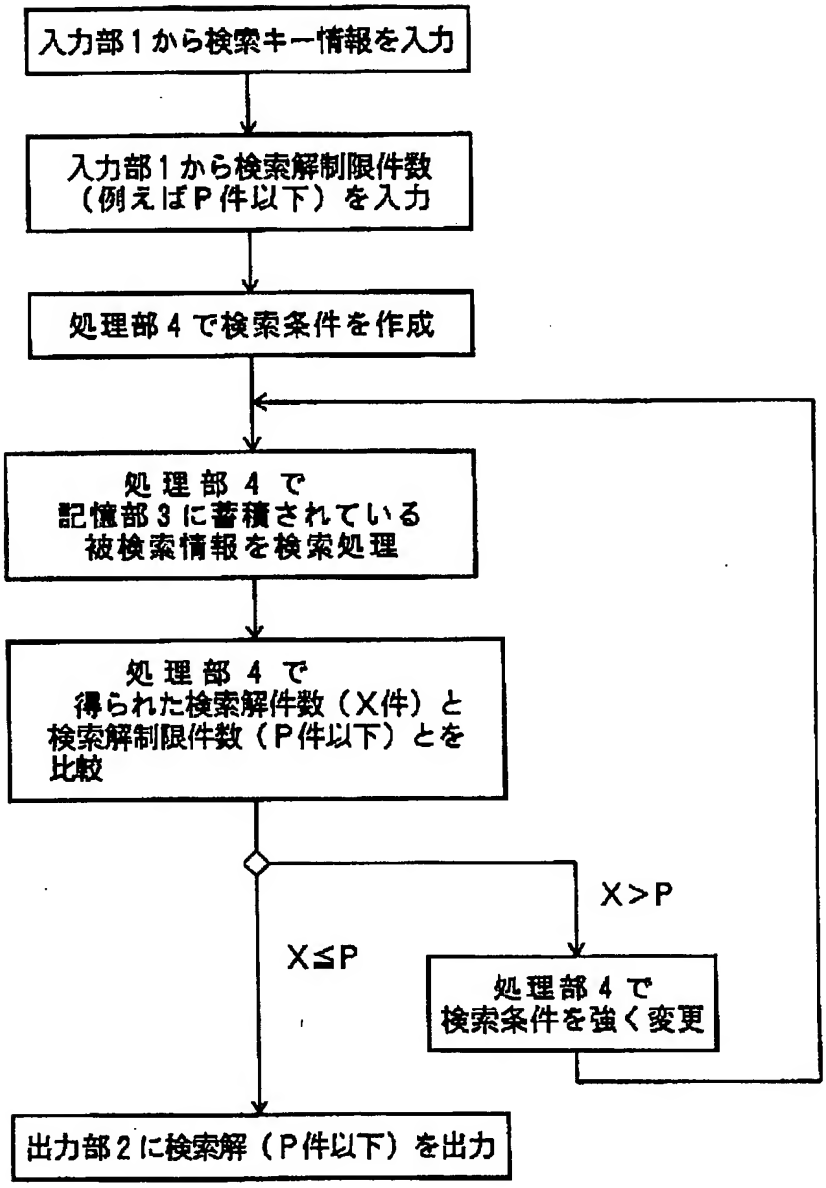
[Drawing 1]



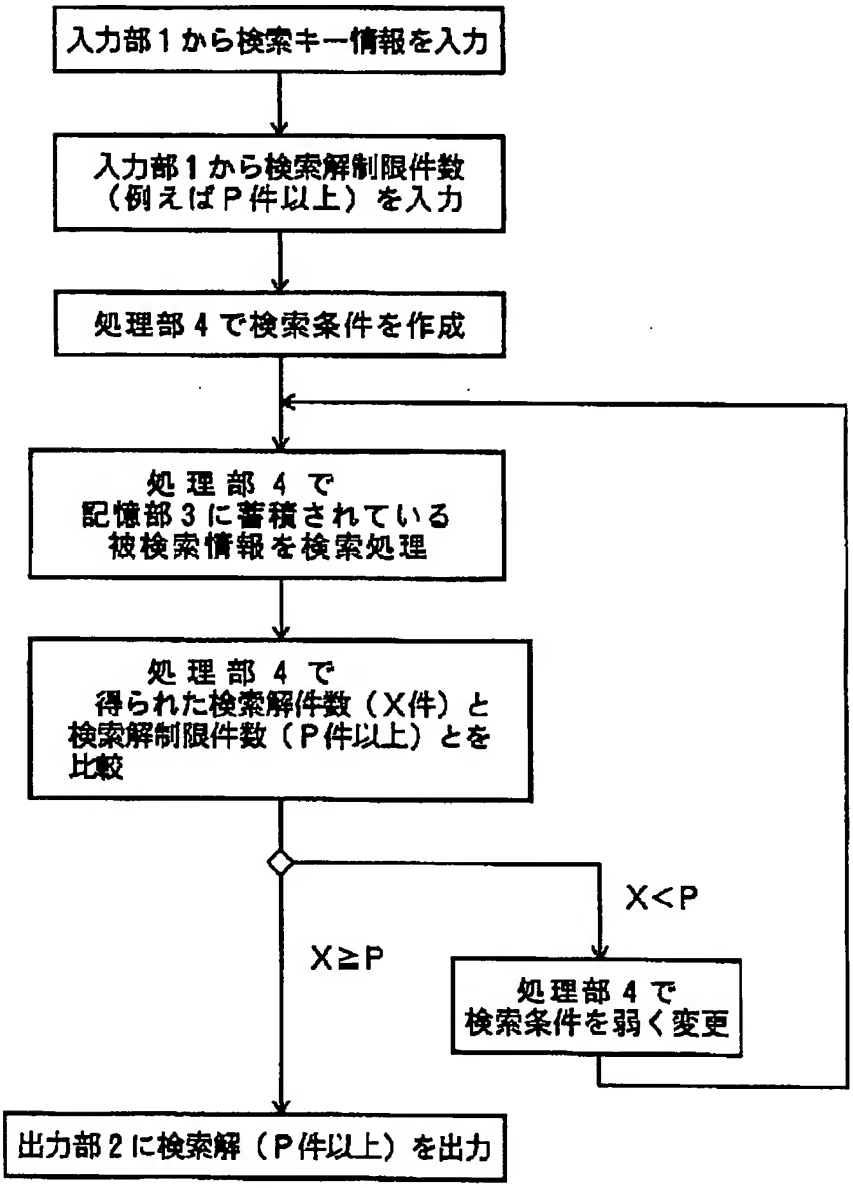
[Drawing 2]


入力部1から検索キー情報を入力
入力部1から検索解制限件数（例えばP件）を入力
処理部4で検索条件を作成
処理部4で記憶部3に蓄積されている被検索情報を検索処理
処理部4で得られた検索解件数（X件）と検索解制限件数（P件）とを比較
X=P
X>P
X<P
処理部4で検索条件を強く変更
処理部4で検索条件を弱く変更
出力部2に検索解（P件）を出力

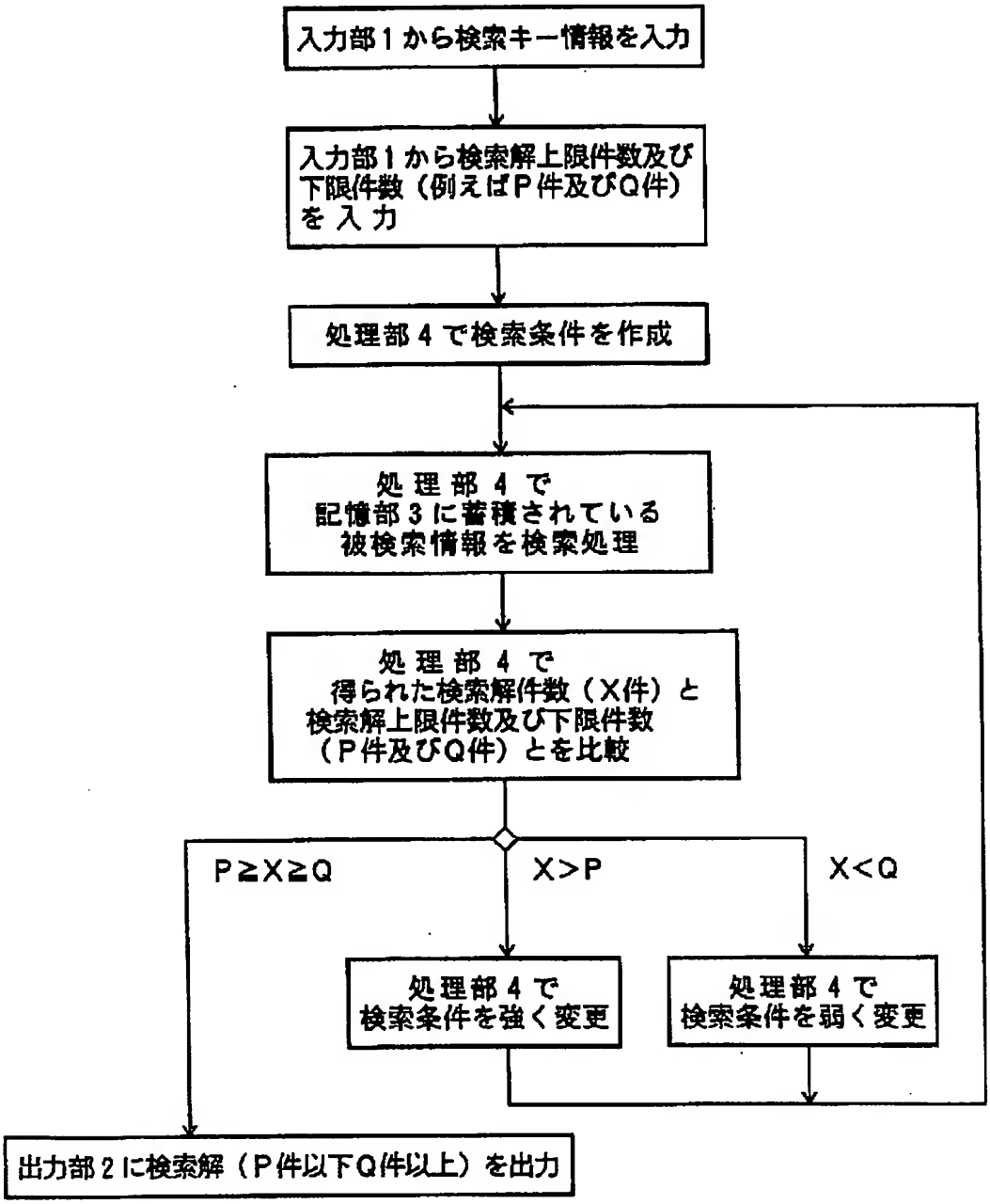
[Drawing 3]


入力部1から検索キー情報を入力
入力部1から検索解制限件数（例えばP件以下）を入力
処理部4で検索条件を作成
処理部4で記憶部3に蓄積されている被検索情報を検索処理
処理部4で得られた検索解件数（X件）と検索解制限件数（P件以下）とを比較
X>P
X≦P
処理部4で検索条件を強く変更
出力部2に検索解（P件以下）を出力

[Drawing 4]


入力部１から検索キー情報を入力
入力部１から検索解制限件数（例えばＰ件以上）を入力
処理部４で検索条件を作成
処理部４で記憶部３に蓄積されている被検索情報を検索処理
処理部４で得られた検索解件数（Ｘ件）と検索解制限件数（Ｐ件以上）とを比較
X<P
X≧P
処理部４で検索条件を弱く変更
出力部２に検索解（Ｐ件以上）を出力

[Drawing 5]



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